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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,001	10/24/2003	William C. Phillips	1023-291US01	9336
28863	7590	08/23/2006	EXAMINER	
SHUMAKER & SIEFFERT, P. A. 8425 SEASONS PARKWAY SUITE 105 ST. PAUL, MN 55125				FLORY, CHRISTOPHER A
ART UNIT		PAPER NUMBER		
		3762		

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SPP

Office Action Summary	Application No.	Applicant(s)
	10/693,001	PHILLIPS ET AL.
	Examiner	Art Unit
	Christopher A. Flory	3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/26/2006.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-4, 7, 18-20, 23 and 25 stand rejected** under 35 U.S.C. 102(b) as being anticipated by Cimochowski et al. (US Patent 5,967,986).

In reference to claims 1, 4, 18 and 25, the Cimochowski et al. patent teaches a signal transfer unit (see abstract) enabling transfer of physiological data from a physiological sensor attached to a mammalian subject in use (which includes both internal and external devices), to a remote base station (see abstract and fig. 12).

According to the Webster's II New Riverside University dictionary the ring like structure of figures 12 within the Cimochowski et al. patent fit the definition of both a channel and an aperture because an aperture is defined as *an opening as a hole gap or slit*, and a channel is defined as *a course through which something can be directed or moved*, and though such a ring was not constructed to, it is still capable of holding a portion of clothing associated with a patient due to the fact that the clothing can be placed within the opening, and in turn hold the ring shaped antennae in a relatively fixed position

relative to an implanted medical device. The Cimochowski et al. patent teaches the use of a cable or cord of some sort to connect the coil with the power supply and monitoring cable (see fig. 12).

In reference to claims 2 and 19, the ring shaped antenna of figure 12 inherently possesses a wide end that can be used for the insertion of clothing.

In reference to claims 7 and 23, referring to an object or orifice, as being teardrop shaped is quite broad considering the fact that a teardrop can be a multitude of shapes considering its environment. Teardrops can appear to be circular, similar to the coil of the Cimochowski et al. patent, in many environments.

In reference to claims 3 and 20, because the opening of the coil can be defined as both a channel and an aperture, if the coil of the device were held vertically then rotated about its vertical axis, the channel/aperture of the device would appear to be much thinner than the channel/aperture of the coil that is not rotated. The examiner suggests that the applicant alters the phraseology of the claim to state that the thinner channel is disposed next to, above, or beneath the wider aperture, or something of the like.

3. Claims 27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Cimochowski et al.

Regarding claims 27 and 29, the Cimochowski et al. patent teaches a signal transfer unit (see abstract) enabling transfer of physiological data from a physiological sensor attached to a mammalian subject in use (which includes both internal and external devices), to a remote base station (see abstract and fig. 12). According to the

Webster's II New Riverside University dictionary the ring like structure of figures 12 within the Cimochowski et al. patent fit the definition of both a channel and an aperture because an aperture is defined as *an opening as a hole gap or slit*, and a channel is defined as *a course through which something can be directed or moved*, and though such a ring was not constructed to, it is still capable of holding a portion of clothing associated with a patient due to the fact that the clothing can be placed within the opening, and in turn hold the ring shaped antennae in a relatively fixed position relative to an implanted medical device. The Cimochowski et al. patent teaches the use of a cable or cord of some sort to connect the coil with the power supply and monitoring cable (see fig. 12). The ring shaped antenna of figure 12 inherently possesses a wide end that can be used for the insertion of clothing. Because the opening of the coil can be defined as both a channel and an aperture, if the coil of the device were held vertically then rotated about its vertical axis, the channel/aperture of the device would appear to be much thinner than the channel/aperture of the coil that is not rotated. The examiner suggests that the applicant alters the phraseology of the claim to state that the thinner channel is disposed next to, above, or beneath the wider aperture, or something of the like.

4. Claims 9-12, 15, 18-20 and 23 stand rejected under 35 U.S.C. 102(e) as being anticipated by Pool et al. (US Patent 6,561,975).

In reference to claim 9, the Pool et al. patent teaches a device that is capable of communicating with an implanted device, as well as teaching that the antenna can be housed within a belt (see column 8, lead lines 34-38). Such a housing inherently

possesses the ability to have clothing pulled through the channel created by buckling the belt, thereby holding the antenna in a substantially fixed position relative to the implanted device.

In reference to claims 10 and 19, the Pool et al. device inherently possesses a wide end to pull clothing through (see column 8, lead lines 34-38).

In reference to claims 11 and 20, because the opening of the belt like housing of the antenna can be defined as both a channel and an aperture, if the belt like housing of the device were held vertically then rotated about its vertical axis, the channel/aperture of the housing would appear to be much thinner than the channel/aperture of the coil when it is not rotated. The examiner suggests that the applicant alters the phraseology of the claim to state that the thinner channel is disposed next to, above, or beneath the wider aperture, or something of the like.

In reference to claim 15, referring to an object or orifice as being teardrop shaped is quite broad, considering the fact that a teardrop can be a multitude of shapes considering the environment. Teardrops can appear to be circular, similar to the belt like housing of the Pool et al. patent, in many environments.

In reference to claims 12 and 18, the Pool et al. patent teaches a signal transfer unit (see abstract) enabling transfer of physiological data from a physiological sensor attached to a mammalian subject in to a remote device (see abstract). According to the Webster's II New Riverside University dictionary the ring like structure of the belt described within the Pool et al. patent (see column 8, lead lines 34-38) fits the definition of both a channel and an aperture because an aperture is defined as *an opening as a*

hole gap or slit, and a channel is defined as a course through which something can be directed or moved, and though such a ring was not constructed to, it is still capable of holding a portion of clothing associated with a patient due to the fact that the clothing can be placed within the opening, and in turn hold the ring shaped antennae in a relatively fixed position relative to an implanted medical device. The Pool et al. patent teaches the use of a “wand or some other extendible head, containing at least an antenna, is connected to the remainder of the programmer unit via a stretchable coil cable...” (See column 3, lines 6-11).

In reference to claim 23, referring to an object or orifice, as being teardrop shaped is quite broad considering the fact that a teardrop can be a multitude of shapes considering the environment. Teardrops can appear to be circular, similar to the aforementioned belt like housing of the Pool et al. patent, in many environments.

5. Claims 25, 28 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Pool et al.

In reference to claims 25, 28 and 29, the Pool et al. patent teaches a device that is capable of communicating with an implanted device, as well as teaching that the antenna can be housed within a belt (see column 8, lead lines 34-38). Such a housing inherently possesses the ability to have clothing pulled through the channel created by buckling the belt, there by holding the antenna in a substantially fixed position relative to the implanted device. The Pool et al. patent teaches a signal transfer unit (see abstract) enabling transfer of physiological data from a physiological sensor attached to a mammalian subject in to a remote device (see abstract). According to the Webster's II

New Riverside University dictionary the ring like structure of the belt described within the Pool et al. patent (see column 8, lead lines 34-38) fits the definition of both a channel and an aperture because an aperture is defined as *an opening as a hole gap or slit*, and a channel is defined as *a course through which something can be directed or moved*, and though such a ring was not constructed to, it is still capable of holding a portion of clothing associated with a patient due to the fact that the clothing can be placed within the opening, and in turn hold the ring shaped antennae in a relatively fixed position relative to an implanted medical device. The Pool et al. patent teaches the use of a “wand or some other extendible head, containing at least an antenna, is connected to the remainder of the programmer unit via a stretchable coil cable...” (See column 3, lines 6-11). The Pool et al. device inherently possesses a wide end to pull clothing through (see column 8, lead lines 34-38). Because the opening of the belt like housing of the antenna can be defined as both a channel and an aperture, if the belt like housing of the device were held vertically then rotated about its vertical axis, the channel/aperture of the housing would appear to be much thinner than the channel/aperture of the coil when it is not rotated. The examiner suggests that the applicant alters the phraseology of the claim to state that the thinner channel is disposed next to, above, or beneath the wider aperture, or something of the like.

6. **Claims 1-3, 25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Bogle et al. (US Patent 4,601,557).**

Regarding claims 1-3, 25 and 27, Bogle et al. discloses an antenna defining an aperture with a channel formed to hold a portion of an item of clothing associated with a

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patient to hold the antenna in a substantially fixed position relative to an implantable medical device (column 4, lines 55-65; column 5, lines 55-65). The antenna inherently comprises a wide end to insert the portion of clothing and a channel substantially narrower than the wide end. It is noted that, as written, the antenna and implanted device will always be reasonably interpreted as in a relative position to one another, regardless of whether the antenna is applied to the person carrying the implant or another person in any other location. Any two positions are relative to one another, regardless of the scale of distance between them.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claims 5, 6, 8, 16, 21, 22, 24 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cimochowski et al.**

In reference to claims 5, 6, 21 and 22, the Cimochowski et al. patent discloses the claimed invention except for rubberized grips. It would have been obvious to one of ordinary skill in the art at the time of the invention's conception to modify the antenna of the claimed device with rubberized grips since it is known in the art that rubberized grips can be used to improve the device's portability.

In reference to claims 8 and 24, though the Cimochowski et al. patent does not teach the use of an insulative telemetry head housing that encases the antenna, the Cimochowski et al. patent does teach the use of telemetry coil that acts as antennae (see fig. 12) and such housing is common in the art.

Thus it would have been obvious to one of ordinary skill in the art to incorporate such housing into the Cimochowski et al. invention to protect the coils from damage and as a result of the commonality of said housing in the art.

In reference to claims 16 and 26, the Cimochowski et al. patent discloses the claimed invention except for a neurostimulator, however the Cimochowski et al. patent does teach the use of an implanted device in conjunction with an external programming device, and the use of an external programmer in conjunction with an internal device is quite common.

Thus it would have been obvious to one of ordinary skill in the art at the time of the claimed invention's conception to modify the implanted neuralstimulator with an external programmer due to the commonality of such a combination and to provide the

user with a convenient means for adjusting the stimulation parameters of the implanted device.

10. Claims 13, 14, 21 and 22 stand rejected, and claims 16, 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pool et al.

In reference to claims 13, 14, 21 and 22, the Pool et al. patent discloses the claimed invention except for rubberized grips. It would have been obvious to one of ordinary skill in the art at the time of the invention's conception to modify the antenna of the claimed device with rubberized grips since it is known in the art that rubberized grips can be used to improve the device's portability.

In reference to claims 16, 17 and 26, the Pool et al. patent discloses the claimed invention except for a neurostimulator, however the Pool et al. patent does teach the use of an implanted device in conjunction with an external programming device, and the use of an external programmer in conjunction with an internal device is quite common.

Thus it would have been obvious to one of ordinary skill in the art at the time of the claimed invention's conception to modify the implanted neurostimulator with an external programmer due to the commonality of such a combination and to provide the user with a convenient means for adjusting the stimulation parameters of the implanted device.

Response to Amendment

Claim 4 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. As amended, claim 4 is sufficient to overcome this rejection, which is hereby withdrawn.

Response to Arguments

11. Applicant's arguments filed 7 June 2006 have been fully considered but they are not persuasive.

12. With reference to claims 1-4, 7, 18-20, 23 and 25 rejected under 35 U.S.C. 102(b) using Cimochowski et al., and claims 5, 6, 8, 16, 21 ,22, 24 and 26, rejected under 35 U.S.C. 103(a) using the same reference, Applicant argues that the cited reference fails to disclose each and every feature of the claimed invention. In particular, Cimochowski et al. fails to teach or suggest an antenna that defines an aperture with a channel formed to hold a portion of an item of clothing. Applicant further argues that, given an alternate definition of channel, the Cimochowski device does not provide a groove, notch, or other structure capable of holding a portion of an item of clothing, since the aperture as disclosed is too large. Examiner maintains that Cimochowski et al. clearly defines an aperture with a channel capable of hold a portion of an item of clothing (Fig. 12). Since the patient is likely wearing clothing, the coil antenna of Cimochowski et al. is held about a portion of the patient's pant leg. Given the lack of disclosure of other support means, the antenna must be sufficiently secured about the leg by frictional force so as not to fall off the patient during proper use. Because the device is capable of frictionally maintaining it's position relative to the patient's body as disclosed, it must necessarily maintain a position relative to the implant regardless of

the patient's state of attire. Furthermore, should the patient be wearing clothing, the loop antenna of Cimochowski et al., worn about the article of clothing, would frictionally fix the antennas position with respect to the article of clothing as well as the implant, and further fix the position of the article of clothing relative to the patients body. It is noted that an encircling position is nonetheless a fixed and relative position.

Applicant further argues that the aperture and channel of the Cimochowski et al. patent be equated to the same structure. Examiner maintains that the opening in the Cimochowski et al. antenna does in fact constitute both an aperture, in that it defines an opening, and a channel, in that it is intended for something (in this case the leg and pant leg of a patient) be passed through said opening.

Regarding the argument that the channel is substantially narrower than the wide end of the aperture, Examiner maintains the original stance that the Applicant alters the phraseology of the claim to state that the thinner channel is disposed next to, above, or beneath the wider aperture, or something of the like.

Applicant further argues that the Office Action did not apply the ordinary meaning of the term "tear drop" nor the meaning of the term as set forth in the Applicant's specification. Examiner maintains that the Cimochowski et al. reference sufficiently discloses a tear drop shaped antenna, as tear drops maintain merely transitory shape as they fall. Furthermore, Applicant misinterprets the principle that claims are interpreted in light of the specification. Although the element of a teardrop shape is found as an example in the specification, the words that were used in the claims were not defined in the specification to require these limitations. A reading of the

specification provides no evidence to indicate that these limitations must be imported into the claims to give meaning to the disputed terms. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064.

13. With reference to claims 9-12, 15, 18-20 and 23, rejected under 35 U.S.C. 102(e) using Pool et al., and claims 13, 14, 21 and 22 rejected under 35 U.S.C. 103(a) using the same reference, Applicant argues that the cited reference fails to disclose each and every feature of the claimed invention. In particular, Pool et al. fails to teach or suggest positioning an antenna relative to an implantable medical device and does not describe an aperture of the antenna defining a channel through which to pull a portion of an item of clothing to hold the antenna relative to an implantable medical device. Examiner maintains that Pool et al. discloses an antenna with an aperture and channel through which to pull a portion of an item of clothing to hold the antenna relative to an implantable medical device for the reasons given regarding the Cimochowski reference above. Applicant further pointed out that Pool discloses that the antenna housing band may, in addition to a belt, include an article of jewelry (column 8, lines 33-37). It is certainly within a reasonable interpretation that an article of jewelry may include a ring, which is, as previously addressed, of a tear drop shape and capable of holding the antenna relative to an implant should a portion of an item of clothing be pulled through the ring.

Regarding the argument that the channel is substantially narrower than the wide end of the aperture, Examiner maintains the original stance that the Applicant alters the

phraseology of the claim to state that the thinner channel is disposed next to, above, or beneath the wider aperture, or something of the like.

Applicant further argues that the Office Action did not apply the ordinary meaning of the term “tear drop” nor the meaning of the term as set forth in the Applicant’s specification. Examiner maintains that the Pool et al. reference sufficiently discloses a teardrop shaped antenna, as tear drops maintain merely transitory shape as they fall. Furthermore, Applicant misinterprets the principle that claims are interpreted in light of the specification. Although the element of a teardrop shape is found as an example in the specification, the words that were used in the claims were not defined in the specification to require these limitations. A reading of the specification provides no evidence to indicate that these limitations must be imported into the claims to give meaning to the disputed terms. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Flory whose telephone number is (571) 272-6820. The examiner can normally be reached on M - F 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher A. Flory
18 August 2006



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